

AMENDMENTS TO THE CLAIMS

1. (Original) Apparatus for enhancing vision of a user having an eye that includes a retina, the apparatus comprising:

a focal modulation device, which is adapted to focus light from objects in a field of view of the user onto the retina while alternating between at least first and second focal states that are characterized by different, respective first and second focal depths, at a rate in excess of a flicker-fusion frequency of the user.

2. (Original) The apparatus according to claim 1, wherein in the first focal state, the focal modulation device is operative to focus the light from distant objects onto the retina, and in the second focal state, the focal modulation device is operative to focus the light from near objects onto the retina.

3. (Currently amended) The apparatus according to claim 1 or 2, and comprising a lens body, comprising a transparent optical material having a predetermined refractive power, wherein the focal modulation device is adapted to modulate the refractive power of the lens body.

4. (Original) The apparatus according to claim 3, wherein the focal modulation device is encapsulated in the lens body.

5. (Original) The apparatus according to claim 4, wherein the lens body is adapted to serve as a contact lens on a surface of the eye.

6. (Original) The apparatus according to claim 4, wherein the lens body is adapted to be implanted as an intraocular lens within the eye.

7. (Original) The apparatus according to claim 3, wherein the lens body is adapted to serve as a spectacle lens.

8. (Currently amended) The apparatus according to claim 1 or 2, wherein the focal modulation device comprises:

a spatial light modulator (SLM), which is adapted to focus the light; and
a control circuit, which is coupled to actuate the SLM so as to alternate between the first and second focal states.

9. (Currently amended) The apparatus according to claim 1 ~~or~~ 2, wherein the focal modulation device is adapted to alternate between the first and second focal states and a third focal state, which is characterized by a third focal depth, intermediate the first and second focal depths.

10. (Currently amended) The apparatus according to claim 1 ~~or~~ 2, wherein the focal modulation device is adapted to alternate between the at least first and second focal states with a period of alternation between 12 ms and 20 ms.

11-27. (Canceled)

28. (Original) A method for enhancing vision of a user having an eye that includes a retina, the method comprising focusing light from objects in a field of view of the user onto the retina in alternation between at least first and second focal states that are characterized by different, respective first and second focal depths, at a rate of alternation that is in excess of a flicker-fusion frequency of the user.

29. (Original) The method according to claim 28, wherein focusing the light comprises, in the first focal state, focusing the light from distant objects onto the retina, and in the second focal state, focusing the light from near objects onto the retina.

30. (Currently amended) The method according to claim 28 ~~or~~ 29, wherein focusing the light comprises placing a lens having a predetermined refractive power between the eye and the field of view, and modulating the refractive power of the lens at the rate of alternation.

31. (Original) The method according to claim 30, wherein the lens comprises a lens body, and wherein modulating the refractive power comprises applying electrical signals to an optoelectronic focal modulation device that is encapsulated in the lens body.

32. (Original) The method according to claim 31, wherein placing the lens comprises placing the lens body so as to contact a surface of the eye.

33. (Original) The method according to claim 31, wherein placing the lens comprises implanting the lens body within the eye.

34. (Original) The method according to claim 31, wherein modulating the refractive power comprises generating the electrical signal at the rate of alternation independently of any signal generated externally to the lens.

35. (Currently amended) The method according to claim 28 ~~or~~ 29, wherein focusing the light comprises mounting a focal modulation device on a spectacle frame, which is worn by the user, and switching the focal modulation device between the first and second focal states.

36. (Currently amended) The method according to claim 28 ~~or~~ 29, wherein focusing the light comprises placing a spatial light modulator (SLM) between the eye and the field of view, and actuating the SLM so as to alternate between the first and second focal states.

37. (Currently amended) The method according to claim 28 ~~or~~ 29, wherein focusing the light comprises alternating between the first and second focal states and a third focal state, which is characterized by a third focal depth, intermediate the first and second focal depths.

38. (Currently amended) The method according to claim 28 ~~or~~ 29, wherein focusing the light comprises alternating between the at least first and second focal states with a period of alternation between 12 ms and 30 ms.

39-64. (Canceled)